

**NAME**

**ofw\_graph**, **ofw\_graph\_get\_port\_by\_idx**, **ofw\_graph\_port\_get\_num\_endpoints**,  
**ofw\_graph\_get\_endpoint\_by\_idx**, **ofw\_graph\_get\_remote\_endpoint**, **ofw\_graph\_get\_remote\_parent**,  
**ofw\_graph\_get\_device\_by\_port\_ep** - Helpers for the graph bindings

**SYNOPSIS**

```
#include <dev/ofw/openfirm.h>
```

```
#include <dev/ofw/ofw_graph.h>
```

*phandle\_t*

```
ofw_graph_get_port_by_idx(phandle_t node, uint32_t idx);
```

*size\_t*

```
ofw_graph_port_get_num_endpoints(phandle_t port);
```

*phandle\_t*

```
ofw_graph_get_endpoint_by_idx(phandle_t port, uint32_t idx);
```

*phandle\_t*

```
ofw_graph_get_remote_endpoint(phandle_t endpoint);
```

*phandle\_t*

```
ofw_graph_get_remote_parent(phandle_t remote);
```

*device\_t*

```
ofw_graph_get_device_by_port_ep(phandle_t node, uint32_t port_id, uint32_t ep_id);
```

**DESCRIPTION**

The `ofw_graph` functions are helpers to parse the DTS graph bindings

**ofw\_graph\_get\_port\_by\_idx()** return the port with id *idx*. It will first check node named *port@idx* and then fallback on checking the *ports* child for a child node matching the id. If no ports matching *idx* is found the function return 0.

**ofw\_graph\_port\_get\_num\_endpoints()** returns the number of endpoints a port node have.

**ofw\_graph\_get\_endpoint\_by\_idx()** return the endpoint with id *idx*. It will first check if there is a single child named *endpoint* and returns it if there is. If there is multiple endpoints it will check the *reg* property and returns the correct *phandle\_t* or 0 if none match.

**ofw\_graph\_get\_remote\_endpoint()** returns the *remote-endpoint* property if it exists or 0.

**ofw\_graph\_get\_remote\_parent()** returns the device node corresponding to the *remote-endpoint* phandle or 0 if none. **ofw\_graph\_get\_device\_by\_port\_ep()** returns the device associated with the port and endpoint or *NULL* if none. The device driver should have called **OF\_device\_register\_xref()** before.

## HISTORY

The **ofw\_graph** functions first appeared in FreeBSD 13.0. The **ofw\_graph** functions and manual page were written by Emmanuel Vadot <[manu@FreeBSD.org](mailto:manu@FreeBSD.org)>.